CLAIMS

- 1. (Previously presented) An intravenous catheter assembly comprising:
 - a catheter having a proximal end and a distal end;
- a catheter adapter in fluid communication with the catheter and having a proximal end and a distal end connected to the proximal end of the catheter;
- an introducer needle disposed, at least in part, within the catheter, the introducer needle having a proximal end and a distal end with an opening;
- a needle hub having a proximal end and a distal end connected to the proximal end of needle;
- a septum housing mounted at the proximal end of the catheter adapter, wherein the septum housing has a particular length includes a proximal end; and
- an elastomeric septum having a distal portion and a proximal portion, the elastomeric septum being disposed in the septum housing, distal, at least in part, to the proximal end of the septum housing, and wherein the septum housing length is configured to apply a desired compressive force to the septum.
- 2. (Previously presented) The assembly of claim 1 wherein the proximal end of the septum housing extends over at least a portion of a proximal face of the septum.
- 3. (Previously presented) The assembly of claim 2 wherein the introducer needle defines a notch therein adjacent to the distal end, and wherein a notch distance is defined as the distance between a proximal end of the notch and a distal end of the opening in the distal end of the introducer needle and wherein the septum has a length greater than the notch distance.
- 4. (Previously presented) The assembly of claim 3 wherein the septum defines a cavity.
- 5. (Previously presented) The assembly of claim 1 wherein the septum housing extends only along the proximal portion of the septum.

- 6. (Previously presented) The assembly of claim 1 wherein the septum housing extends along both the proximal portion and the distal portion of the septum.
- 7. (Previously presented) The assembly of claim 1 wherein the septum is disposed in the septum housing in a friction fit.
- 8. (Canceled) The assembly of claim 1 wherein the septum housing provides a compressive force to the septum.
- 9. (Previously presented) The assembly of claim 1 wherein the septum housing is affixed to the catheter adapter by at least one of an interference fit or an adhesive or a weld.
- 10. (Previously presented) A septum assembly comprising:

A catheter adapter having a proximal end and a distal end;

a rigid septum housing mounted at the proximal end of the catheter adapter, wherein the septum housing has a particular length;

an elastomeric septum having a distal portion and a proximal portion, wherein a cavity is located in the septum, extending from the distal portion to the proximal portion and wherein the elastomeric septum is disposed in the septum housing; and wherein the septum housing length is configured to apply a desired compressive force to the septum.

- 11. (Previously presented) The assembly of claim 10 wherein the septum housing extends only along the proximal portion of the septum.
- 12. (Previously presented) The assembly of claim 10 wherein the septum housing extends along both the proximal portion and the distal portion of the septum.
- 13. (Previously presented) The assembly of claim 10 wherein the septum is compressed within the septum housing and held in a friction fit.

14. (Previously presented) The assembly of claim 10 wherein the septum housing is affixed to the catheter adapter by at least one of an interference fit or an adhesive or a weld.

15. (Previously presented)

An assembly comprising:

a needle having a cross section;

an adapter having a proximal end and a distal end;

a septum housing having a fixed length, fixed shape and fixedly attached to the adapter;

a septum fixedly disposed in the septum housing and including a septum proximal portion and a septum distal portion;

wherein the needle has a proximal end and a distal end with an opening, wherein the introducer needle defines a notch therein adjacent to the distal end, and wherein a notch distance is defined as the distance between a proximal end of the notch and a distal end of the opening in the distal end of the introducer needle and wherein the septum has a length greater than the notch distance; and wherein the septum housing length is configured to apply a desired compressive force to the septum.

- 16. (Previously presented) The assembly of claim 15 wherein the proximal end of the septum housing abuts and extends over at least a portion of a proximal face of the septum.
- 17. (Previously presented) The assembly of claim 16 wherein the septum defines a cavity.
- 18. (Previously presented) The assembly of claim 17 wherein the septum housing extends only along the proximal portion of the septum.
- 19. (Previously presented) The assembly of claim 18 wherein the septum is disposed in the septum housing in a friction fit and the septum housing provides a compressive force to the septum.
- 20. (Previously presented) The assembly of claim 19 wherein the septum housing is affixed to

the catheter adapter by at least one of an interference fit or an adhesive or a weld.